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Middle school study skills : the correlation between binder skills and academic achievement

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Middle School Study Skills: The Correlation Between Binder Skills and Academic Achievement

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ABSTRACT

MIDDLE SCHOOL STUDY SKILLS:
THE CORRELATION BETWEEN BINDER SKILLS
AND ACADEMIC ACHIEVEMENT

by Elizabeth Ehm Lobay

The purpose of this study was to investigate the correlation between the organizational skills and academic achievement of secondary students. The study included 88 sixth, seventh and eighth grade students at a California middle school. The study used a check sheet to assess how students used three-ring binders equipped with calendars, pencil pouches and subject dividers to manage their assignments. Scores on the binder check sheet were compared with grade point averages to determine correlations. The results showed no significant correlation between binder skills and grade point averages for students in regular education classes. However, the results showed a strong positive correlation between binder skills and grade point averages for students with learning disabilities. For both groups, the results of the study showed a strong relationship between having the required school supplies and grades.

DEDICATION

To my dear husband Tony and our wonderful children Tony and Natalya, with appreciation for all the encouragement, support, patience and love you have given me during my years as a student at San Jose State University.

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I would like to thank the kind people who helped me so much with this thesis. Without their time and support, this would not have been possible.

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To the students at PGMS who cheerfully opened their binders for me, a big thank you! Your generosity will help my future students.

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CHAPTER ONE

INTRODUCTION

With one child in four termed "at risk" (Sprick, 1992) and resources for special education in jeopardy (Latno-Yamate, 1992), it seems appropriate to review ways of helping students with difficulties to meet the challenge of school. Cosden (1990) cites three issues that require special consideration in this decade. First, as demographics have changed and our schools serve children from more diverse backgrounds, children from ethnic minorities and lower socioeconomic backgrounds have been overrepresented in referrals for special education and in classification as having mild handicaps. Second, patterns of poor attendance and dropping out pose problems for school and society. Third, lack of school finances causes increasing problems. "Educators are being asked to improve services to students with more diverse needs without substantial increases in the resources available to achieve these effects. Thus, efficient use of limited resources will affect the future configuration of special education" (Cosden, 1990, p.5).

Comer (1988) addresses the particular needs of minority students and points out the cost to the nation of educational failure.

> Poor minority youth are undereducated in disproportionate numbers across the country. Academically such children may lag behind the national average by up to two years. In large cities as many as 50% of minority children drop out of school. The failure to educate these children makes ever harder the task of rectifying economic and social inequities (p.42).

While legislation protects the rights of over four million children to receive services under PL 94-142 (Florian & West, 1989), there is interest in reexamining ways of serving children with special needs. Areas of interest include programs that integrate children with handicaps into regular education (Affleck, Madge, Adams, & Lowenbraun, 1988; Latno-Yamate, 1992), and programs that involve parents more fully (Comer, 1988; The Special EDge, 1991). The current interest and support for school restructuring offers a "window of opportunity" for special educators in these challenging times (Winget, 1992).

Regardless of where students with learning disabilities are placed, they have a number of handicaps which affect their chances for success, particularly at the secondary level. Adolescents with learning disabilities often have a history of failure and frustration, and they may show minimal motivation (Alley & Deshler, 1979). Students with

learning disabilities typically are passive, inactive learners (Lenz, 1983) with the memory strategies of younger children (Leal & Rafoth, 1991). They use significantly fewer self-regulating strategies when studying or doing homework than high achieving students (Zimmerman & Pons, 1986). Students with learning disabilities may have difficulty knowing when to use a particular strategy (Ellis & Lenz, 1990). Secondary curricula challenges students with learning disabilities for several reasons (Alley & Deshler, 1979). Secondary classes emphasize the acquisition of content; teachers assume that secondary students already have the basic skills of reading, writing, spelling and spoken language. The structure of middle school and high school offers less support and individual attention than elementary school. Independently completing assignments becomes a problem for students with learning disabilities (Lenz, Ehren, & Smiley, 1991) and a cause for failing grades (Quackenbush & Gastineau, 1989). Students have problems understanding assignments, studying, and completing assignments (Moskowitz, 1988). Parents report problems helping their children to develop independent study habits (Reetz, 1991).

The learning strategies curriculum, developed at the University of Kansas, addresses the needs of students with

learning disabilities at the secondary level (Alley & Deshler, 1979; Deshler & Schumaker, 1986). Learning strategies emphasize tasks (such as note-taking and memorization) rather than content, with the goal of teaching students to be better learners in a variety of situations. Study skills, referred to as "school survival skills" by Ellis and Lenz (1987), may make an important difference for students (Archambeault, 1992; Wood, 1991), especially for students who have a hard time with the mechanics of recording and completing homework assignments (Horner, 1987; Swartz, 1986).

Skills for School Success (Archer & Gleason, 1989) teaches students a system for managing school assignments by using a three-ring binder equipped with a calendar, a pencil pouch, and subject dividers. This system also serves as a communication device for parents. Parental involvement, actively encouraged by the California State Department of Education (The Special EDge, 1991), may make an important difference for children (Stainback & Stainback, 1989). This study investigates the use of the three-ring binder and calendar system at Pacific Grove Middle School to see how binder use relates to achievement as measured by report card grades for students in regular and resource classrooms.

Background

Pacific Grove Middle School (PGMS) is a 6th, 7th and

8th grade school located in Pacific Grove, CA, and it is the only middle school in the Pacific Grove Unified School District (PGUSD). The school district includes all of the city of Pacific Grove and a portion of Pebble Beach (Peiffer, 1992).

Pacific Grove Middle School has an enrollment of slightly more than 500 students. The ethnic distribution of students in 1990-91 was 2% Asian, 1% Black, 2% Hispanic, and 95% White (Pacific Grove Middle School, 1991). PGMS students come from two feeder elementary schools, and students move on to Pacific Grove High School (Whitmore, 1992).

PGMS has had a study skills program for over five years (Whitmore, 1992). All students have a three-ring binder with subject dividers, one section for each class, and an assignment calendar. The school provides calendars from the Curriculum Associates Study Skills program for each student. Homework assignments are to be written on the calendars, according to the directions given at the start of the calendar, so there is some uniformity about the system throughout the school. Notes, handouts, and assignments are kept in the sections for each class. The use of binders and calendars is communicated to parents and students through newsletters and the school handbook (Pacific Grove Middle School, 1992; Whitmore, 1992). Binders and calendars are

key tools for homework at PGMS. Students and parents are told to expect one to two hours of homework per night (Pacific Grove Middle School, 1992).

Problem Statement

Students with learning disabilities at the secondary level have problems completing and turning in assignments (Lenz et al., 1991), which may result in failing grades (Quackenbush & Gastineau, 1989). One aspect of assignment completion identified by Lenz et al. (1991) is completion management: "the planning, integration, and organization of time, interests, and resources that facilitate the use of academic skills and knowledge" (p.167). This would include writing down assignments, which is a problem for many students beginning in the intermediate grades (Moskowitz, 1988; Swartz, 1986).

Parents report problems in helping their children to develop independent study habits (Reetz, 1991). Ellis and Lenz (1990) report that teachers' implementation of techniques that would help mildly handicapped students will be affected by their perception of the value of the technique, and the ease of implementation. The binder system, as taught in Skills for School Success, appears to be a simple but important tool to assist students with learning disabilities to complete assignments and turn them in. The assignment calendar can be a helpful communication

device for parents. The binder system should also meet teachers' need for a technique which is valuable in assisting students and is easy to implement.

Purpose Statement

The purpose of this project is to investigate the use of the binder system at Pacific Grove Middle School to see how binder use correlates with achievement as measured by report card grades for students in regular and resource classrooms.

Research Questions

The goal of this study is to answer the following questions relating to middle school study skills:

1. What is the correlation between overall binder use and achievement as measured by report card grades?
2. Is there a relationship between calendar use and achievement as measured by report card grades?
3. Is there a relationship between the use of separate sections in the binder for each class, and achievement as measured by report card grades?
4. Is there a relationship between overall organization of paperwork and achievement as measured by report card grades?
5. Is there a difference in the relationship between binder use and grades for students in regular classes and students in the resource program?

Definition of Terms

For the purpose of this study, the following terms will be defined as stated.

At risk - Students who are likely to experience significant difficulty in school.

Learning disability- A term used to describe a significant discrepancy between achievement and ability, typically in reading, writing and/or mathematics.

Learning strategies - Techniques , principles, or rules that will facilitate the acquisition, manipulation, integration, storage and retrieval of information across situations and settings.

Mainstream - Regular education classes, as opposed to classes organized for special education or students with special needs.

Middle school- A school organized for students in grades six, seven and eight.

Resource classes - Special education programs serving students with learning disabilities, typically for part of the school day.

Study skill - A strategy used to facilitate the process of learning, often in connection with test taking or assignment completion.

Assumptions

For the purposes of conducting this research, the

researcher assumed the following:

1. Binders for a random sample of regular and students with learning disabilities would be available for evaluation.
2. Report card grades for the above students would be available.

Limitations

For the purpose of this study, the author accepted the following limitations:

1. The study would be limited to a random sample of students in regular education classes and students with learning disabilities in sixth, seventh and eighth grade at Pacific Grove Middle School.
2. The research would be limited to the students who volunteered to make their binders available to the researcher.

Delimitations

For the purposes of conducting this study, the researcher encumbered the study with the following restrictions:

1. This study was limited to Pacific Grove Middle School thus making the results not generalizable to other schools in California or in the United States.
2. The study considered students enrolled at PGMS in regular education and resource programs.

Significance of the Study

This study will be a help to students, parents, teachers and administrators. With proper implementation and support it can be utilized to:

1. Give students a perspective on the importance of the binder system in getting good grades.
2. Give parents assistance in helping their children in regular and resource classes to meet the organizational demands of school.
3. Give teachers a perspective on the relationship between the use of the binder system and student achievement.
4. Give administrators information on the effectiveness of a low-cost, readily available program which may be implemented for at risk students.

Summary

With significant numbers of students at risk for failure (Comer, 1988; Sprick, 1992), resources for special education strained (Latno-Yamate, 1992), and the efficacy of the special education delivery system being questioned (Affleck et al., 1988; Cosden, 1990), it important to identify strategies which are effective for increasing student success. At the middle school level, students with learning disabilities face a particular challenge as they make the transition from the nurturing atmosphere of elementary school to a situation calling for independence

and organization, with the emphasis on content as opposed to basic skills (Alley & Deshler, 1979). Learning strategies and study skills can make a difference for students with special needs (Alley & Deshler, 1979; Archer & Gleason, 1989; Deshler & Schumaker, 1986; Lenz et al., 1987; Lenz et al., 1991; Missouri LINC, 1991). One component of Skills for School Success (Archer & Gleason, 1989) is the binder system, a three-ring binder with an assignment calendar and sections for each class. Low in cost and readily available, the binder would appear to be an important tool for organizing and facilitating middle school work. This study is designed to show how the use of the binder system relates to student achievement.

The next chapter will review literature relevant to this project, including the following: issues in special education; the profile of the student with learning disabilities; reasons why secondary curriculum poses a problem for students with learning disabilities; the problem of assignment completion; the learning strategies curriculum as a help for secondary students; and study skills programs which address the management of student materials such as homework assignments.

CHAPTER TWO

REVIEW OF THE LITERATURE

Introduction

Increasing numbers of children are having difficulty in school today (Sprick, 1992). At the same time, resources for special education are strained (Latno-Yamate, 1992), and the special education delivery system is being reevaluated (Affleck et al., 1988), with more students with learning disabilities being served in regular classrooms and a greater emphasis on parent involvement (Comer, 1988; The Special EDge, 1991). However students with learning disabilities are served, they come to secondary school with many handicaps: low basic skills, a history of failure, low motivation, a passive learning style, memory deficits, and few strategies for meeting curricular demands (Alley & Deshler, 1979; Leal & Rafoth, 1991; Lenz, 1983; Zimmerman & Pons, 1986). With the secondary level emphasis on content and independent assignment, students with learning disabilities may experience failure as shown in low grades (Lenz et al., 1991; Quackenbush & Gastineau, 1989). Learning strategies and study skills can make a difference for adolescents with learning disabilities (Alley & Deshler, 1979; Archer & Gleason, 1989; Deshler & Schumaker, 1986; Lenz et al., 1987; Lenz et al., 1991; Missouri LINC, 1991).

Changes in Special Education

American education faces major challenges in this decade. One child in four is labeled "at risk" for school failure (Sprick, 1992). Cosden (1990) listed three issues of special concern at this time. First, due to significant changes in demographics, schools are serving greater numbers of children from diverse ethnic groups, bilingual homes, and lower socioeconomic status. A disproportionate number of these children are being referred for special education assistance. Cosden wrote, "These children do need help to succeed in regular classrooms; however, it is not clear that the current confines of special education are appropriate places for them to receive help" (p. 5). Second, Cosden addressed the issue of school attendance. The increasing dropout rate is a problem for schools and society. Third, Cosden cited the fact that "these changes in the schools are occurring in a climate of increased fiscal constraint" (p.5). Latno-Yamate (1992) offered a similar view of the financial outlook for California schools, suggesting that the coming years will be even more of a monetary challenge.

Comer (1988) reported on the failure of schools to meet the needs of minority children, because of the "sociocultural misalignment between home and school" (p. 44). Comer criticized educational reforms which focus on instruction and curriculum alone.

> Such approaches reveal a blind spot: they assume that all children come from mainstream backgrounds and arrive at school equally well prepared to perform as the school expects them to. Reading, writing, arithmetic and science are delivered to students in much the same way as tires, windows and doors are attached to the frame of an automobile on an assembly line. Yet students do not come in standardized frames that passively receive what is delivered. (p. 43)

Comer reported on a successful program which brought parents into New Haven, Connecticut schools as classroom assistants and as part of a management team. Parents participated in social events such as potlucks and helped write a curriculum of social skills. The program resulted in significant academic gains and a reduction of behavior problems.

The Special EDge (1991) reported on the 1989 policy of the California Board of Education which states that a child's education is a shared responsibility between school and parent, and that "to educate all students effectively, schools and parents must work together as knowledgeable partners" (p. 16).

According to Latno-Yamate (1992), recent legislation will result in more efforts to serve children with special needs in the regular classroom. Assembly Bill 3040 will

provide guidelines for serving students with learning disabilities that are intended to avert special education referral and placement. Latno-Yamate cited costs and increasing numbers of children needing assistance as reasons behind efforts to keep children in regular education.

Affleck, Madge, Adams and Lowenbraun (1988) reported on two concerns that contributed to the development of the Integrated Classroom Model (ICM) in the Issaquah School District, Washington, which included children with mild handicaps children in an integrated classroom staffed by regular and special education personnel. One concern was financial: "No one is willing to accept the increased costs associated with runaway increases in special education enrollment" (p. 340). The other concern was effectiveness; Affleck et al. cited research which favored an integrated approach. The ICM program in the Issaquah School District was found to be at least as effective as the resource room program, and cost effective (Affleck et al., 1988).

To conclude, increasing numbers of children are having difficulty in school (Comer, 1988; Sprick, 1992). At the same time, resources for special education are strained and the present delivery system of special education services is being questioned (Affleck et al., 1988; Latno-Yamate, 1992). For these reasons, it seems likely that more children with special needs will be placed in regular classrooms.

Students with learning disabilities, whether served in resource rooms or regular classrooms, have a unique profile of learning differences which will affect their chances for success.

Characteristics of Students with Learning Disabilities

Students with learning disabilities have a number of handicaps that will affect their chances for success at the secondary level. Deshler and Schumaker (1986) listed three factors they considered when designing learning strategies. First, students with learning disabilities often have a history of failure and frustration. Second, these students may show minimal motivation. Third, students with learning disabilities are under a significant time constraint when they reach secondary school; they are already behind and running out of time to acquire basic skills as well as content.

Lenz (1983) described students with learning disabilities as inactive or passive learners. Lenz, Alley, and Schumaker (1987) studied the effects of advance organizers in regular classrooms and found that students with learning disabilities did not benefit from this technique unless they were specifically directed to expect the advance organizers and to use them. They noted that "regular teachers' effectiveness must be defined both in terms of the degree to which they use a given instructional

tool and in terms of the degree to which they activate students to respond to that tool" (p. 65).

Leal and Rafoth (1991), investigating memory, reported that students with learning disabilities behave like younger children on tasks such as remembering the homework assignment. They gave the example of a teacher who tells her class to copy the homework assignment from the board.

> A few days later, several children in the classroom inform the teacher that they do not have their homework assignment for that day because they forgot what they were supposed to do. When the teacher asks them if they had written down the assignment that was on the board the previous day, the students respond, "No, yesterday you only told us that this was our assignment, you didn't tell us to write it down." (p. 234)

Leal and Rafoth (1991) reported that immature learners can be taught strategies to improve memory performance, but they need to be prompted to use these strategies or they will revert to their previous behavior. This seems consistent with the findings of Lenz et al. (1987) in regard to students with learning disabilities needing to be cued to benefit from advance organizers.

Zimmerman and Pons (1986) found a difference in the use of self-regulating strategies between high and low achieving

students. They interviewed high school students from a high achieving track and a low achieving track of a suburban high school. They asked students about 14 self-regulating strategies in six learning situations, including homework and test preparation. Strategies included organizing and transforming, such as outlining; keeping records and monitoring, such as reviewing notes; and environmental structuring, such as moving to a quiet place to study. Students in the high achieving group reported significantly greater use for 13 out of 14 strategies than did students in the low achieving group. Zimmerman and Pons observed that "Perhaps the most impressive evidence of the size of this relationship was the finding that 93% of the students could be correctly classified into their appropriate achievement track group through knowledge of their self-regulation practices" (p. 624).

To summarize, students with learning disabilities at the secondary level have a distinct profile. They may have a history of failure and low motivation (Deshler & Schumaker, 1986). Students with learning disabilities typically are passive, inactive learners (Lenz, 1983). They need to be cued to use learning strategies (Deshler & Schumaker, 1986; Lenz et al., 1987). Students with learning disabilities show the memory strategies of younger children (Leal & Rafoth, 1991). Low achieving students make

significantly less use of self-regulating strategies (Zimmerman & Pons, 1986). As students with learning disabilities face secondary school, they deal with the added challenge of a content-based curriculum, without the nurturing support of the single-teacher classroom typical of elementary school (Alley & Deshler, 1979).

The Challenge of Secondary Curriculum

Moving into the secondary curriculum presents a particular challenge for students with learning disabilities for several reasons (Alley & Deshler, 1979). First, the primary curriculum focuses on the acquisition of skills: reading, writing, spelling, mathematics, and spoken language. In contrast, the secondary curriculum emphasizes content and assumes that students have mastered the basic skills. As Alley and Deshler point out, "Not only do secondary curriculums demand the basic skills of decoding and computation taught in the elementary school, but they also demand a much broader set of skills in listening, thinking, speaking, reading, writing, mathematics, and personal/social skills" (p. 6). Also, the structure of middle school and high school offers less support and individual attention by teachers, which may be a hardship for students with learning disabilities (Alley & Deshler, 1979).

Deshler and Lenz (1989) summarized the demands placed on adolescents in four areas. Academically, they need to gain information and demonstrate that information. Socially, they need to follow rules. They need to set goals and meet them, and finally they need to solve problems in different situations. Low-achievers often lack the skills to meet these demands. "In summary, data from various research studies indicate that students with learning disabilities and other low-achieving students have deficits related to the demands of settings in which they are required to participate and be successful" (Deshler & Lenz, 1989, p. 208).

The traditional approaches at the secondary level for assisting learning disabled and low-achieving students have dealt with either skills or content. Neither approach completely succeeds in enabling these students to meet independently the demands of school, the workplace, or the community (Deshler & Lenz, 1989). Ellis and Lenz (1990) cite the problem with participation in resource room programs focusing on basic skills: students lose time and opportunities for content-area instruction.

Increasingly, schools place students with learning disabilities in regular content classes (Cosden, 1990). Teachers modify content to meet student needs, which may result in a watered down curriculum, or in a situation

which puts tremendous demands on both students and teachers (Lenz et al., 1987).

Alley and Deshler (1979) note a problem with secondary curriculum that goes beyond the classroom:

> Current educational practices seem to promote a system that teaches students to learn specific pieces of information and skills quite well but minimizes the acquisition of principles that will facilitate problem-solving and application of skills to a variety of tasks in different situations.(p. 18)

In summary, students with learning disabilities face several challenges as they move from elementary to secondary school because of their lack of skills, and because of the organization and demands of secondary school (Alley & Deshler, 1979). In addition to the challenges inherent in a content-based curriculum and the structure of secondary school, students with learning disabilities face increased demands for independently completing assignments.

Completing Assignments

Secondary curriculum commonly involves independent completion of assignments, which is frequently a problem for students with learning disabilities because of their lack of organizational and problem solving skills and their difficulties in setting appropriate goals (Lenz, Ehren, & Smiley, 1991). Not completing assignments may result in

failing grades. Quackenbush and Gastineau (1989) found that nearly 45% of all seventh and eighth graders at the middle class school they studied had at least one D or F in the first quarter. They note, "It occurred to me that the time-honored way for otherwise capable children to fail is not to complete their work and turn it in on time" (p. 3).

Lenz et al... (1991) investigated the subject of assignment completion and found that it involves many different skills.

> As a result, the lament that 'she doesn't complete assignments' provides little information related to the type of intervention that is required to assist the student. For example, failure to complete assignments may be related to a lack of knowledge about the subject matter, lack of skills or strategies to produce the required product, a failure to clearly understand and write down the assignment, a failure to store a completed assignment in an appropriate place so that it can be retrieved and turned in when it is due, lack of desire, forgetfulness, etc. (p. 167)

Lenz et al. (1991) organized assignment completion into two areas: completion knowledge and completion management. Completion knowledge involves the academic skills to do the assignment; completion management involves the "planning, integration, and organization of time,

interests, and resources that facilitate the use of academic skills and knowledge" (p. 167). Lenz et al. went on to report that there are three general types of assignments: study, daily work, and projects. These may be completed in the classroom or as homework.

Reetz (1991) reviewed the role that parents have in assignment completion. "Regardless of whether teachers intend to include parents in these episodes of learning, parents remain integral members of the homework triad. This is especially true in the middle school years" (p. 14). Reetz (1991) studied the problems parents have in helping their children with homework by surveying parents of fifth grade students in South Dakota by questionnaire. Out of 570 responses, 60% of the parents reported having major or minor problems helping their children develop independent study habits.

In summary, completing assignments is frequently a problem for students with learning disabilities (Lenz et al., 1991) and a cause of failing grades (Quackenbush & Gastineau, 1989). Parents report problems helping their children to develop independent study habits (Reetz, 1991). The learning strategies curriculum, developed at the University of Kansas, offers concrete ways for learning disabled adolescents to deal with secondary curriculum and independent assignment completion.

Learning Strategies and Study Skills

The learning strategies curriculum addresses the needs of students with learning disabilities at the secondary level (Alley & Deshler, 1979; Deshler & Schumaker, 1986). The purpose of the program is to teach students how to learn, and the emphasis is on tasks, such as note-taking and memorization, rather than content. The first step in the instruction process is "to understand the types of curriculum demands that the student is failing to meet (e.g., taking notes or writing well-organized paragraphs)" (Deshler & Schumaker, 1986, p. 585). A structured, eight step teaching procedure is designed to take the student to a level at which strategy use will be automatic and the student will generalize the use of the strategy in other settings.

Ellis and Lenz (1990), reviewing techniques for content-area learning, noted three issues which may affect their implementation.

> Teachers' perceptions of (a) competence in using the technique, (b) its value relative to attaining instructional goals, and (c) ease in which the intervention is employed are critical variables that influence this climate and will logically have a significant impact on whether teacher will actually employ the procedure in their content-area classrooms. (p. 11)

Ellis and Lenz (1987) compared learning strategies and traditional study skills and referred to study skills as "school survival skills" (p. 95). They noted the problem students with learning disabilities have in not knowing when to use a strategy. Reviewing study skills, Wood (1991) observed that "many teachers assume when assignments are given that students know what to do. Discussions with these students will soon show this is not the case" (p. 18). Discussing the reasons for teaching study skills, Wood noted that out of the many factors which affect school learning, "the teaching of study skills seems most immediately manageable in the classroom. In turn, it can affect motivation and the student's view of himself or herself as a learner" (p. 19).

According to Archambeault (1992), successful students are aware of which study strategies work best for them. This seems consistent with the findings of Zimmerman and Pons (1986), showing that high achieving students have a significantly greater use of self-regulating strategies. As noted earlier, students with learning disabilities may have difficulty choosing a strategy (Ellis & Lenz, 1990). Archambeault observes that "Not all students realize that individuals must select those study strategies that are best for their own unique purposes. Study skill instruction must empower learners to control their own learning" (p. 469).

Swartz (1986) and Horner (1987) addressed the problem of students who need help writing down assignments. Swartz reported on a program in her seventh grade reading department to develop a study skills program. "A major problem identified was that the students did not remember their assignments because they were not organized enough to keep a list" (p. 264). Horner recommended a system for recording assignments partly as a way of making the parents' role in homework a more positive experience.

Stainback and Stainback (1989), writing on ways for parents to help children learn study skills, reported:

> The difference between children who do poorly in school and those who do well often relates to what their parents do at home to help. When parents take the time to help, it can influence school success as much or more than a child's intellectual capacity or the quality of the school he or she attends. Good study skills will provide your child with a basic tool needed to succeed in school. So what can you do to help? (p. 10)

Programs that help communicate assignment and homework expectations would seem to make parents' participation more likely. Such communication is facilitated through the notebook and assignment calendar system taught in Skills for School Success (Archer & Gleason, 1989). This program,

aimed at grades three through six but also used in middle school and in remedial situations, teaches students to use a three-ring binder to organize assignments. Students learn to record homework on an assignment calendar, which also serves as a communication device for parents. Such a communication device would seem to fit with the California State Department of Education policy of 1989 which states that a child's education is a shared responsibility (The Special EDge, 1991). Improved communication may also be a step towards alleviating what Comer (1988) refers to as the "sociocultural misalignment between home and school" (p. 44).

Summary

With the combination of increasing numbers of children at risk for failure in school (Comer, 1988; Sprick, 1992), budget constraints (Latno-Yamate, 1992), and questions about the efficacy of the special education delivery system (Affleck et al., 1988; Cosden, 1990), it seems appropriate to review ways of helping students with learning disabilities succeed in the mainstream. Learning strategies and study skills can make a difference for middle school and high school students with special needs (Alley & Deshler, 1979; Archer & Gleason, 1989; Deshler & Schumaker, 1986; Lenz et al., 1987; Lenz et al., 1991; Missouri LINC, 1991). A three-ring binder equipped with pencil pouch, subject

dividers, and an assignment calendar helps students to manage their assignments, with the calendar serving as a communication device for parents (Archer & Gleason, 1989). The binder system would appear to be a valuable tool for helping learning disabled and at risk students to meet the demands of secondary curriculum. The purpose of this study is to investigate the use of the binder system at Pacific Grove Middle School to see how binder use correlates with achievement as measured by report card grades. The next chapter will describe the methodology of the study.

CHAPTER THREE

METHODOLOGY

Introduction

Today one student in four is considered at risk for failure in school (Sprick, 1992). As demographics have changed, schools serve children from more diverse backgrounds, ethnic minorities, and bilingual homes, and a disproportionate number of these children are referred for special education (Cosden, 1990). Attendance and dropping out continue to be problems for schools and society. At the same time, resources for special education are strained (Latno-Yamate, 1992), and the special education delivery system is undergoing changes, with greater numbers of children with learning disabilities being placed in regular education.

For students with learning disabilities, secondary curriculum is a challenge because of the emphasis on content as opposed to basic skills, and because of the structure of secondary schools. These students, with a history of low basic skills, failure, frustration, and low motivation (Alley & Deshler, 1979), enter a situation at middle school and high school that calls for independence and skills as a learner. Students with learning disabilities typically lack the strategies which characterize high achieving students (Ellis & Lenz, 1990; Leal & Rafoth, 1991; Zimmerman & Pons,

1986). The learning strategies curriculum can help adolescents with learning disabilities to meet the challenge of secondary curriculum by teaching skills which are needed across the curriculum, such as note-taking, memorization, and test preparation (Alley & Deshler, 1979; Deshler & Schumaker, 1986; Missouri LINC, 1991). Independent completion of assignments is a problem for many students, resulting in failing grades (Lenz et al., 1991; Quackenbush & Gastineau, 1989). Many students lack the organizational skills to write assignments down and keep assignments organized (Moskowitz, 1988). One tool to help students manage their assignments is the three-ring binder equipped with subject dividers and an assignment calendar (Archer & Gleason, 1989). The purpose of this study is to investigate the correlation between the use of the binder system and academic achievement by students in regular and resource classes at Pacific Grove Middle School.

The Pacific Grove Middle School Community

Pacific Grove Middle School is a 6th, 7th and 8th grade school located in Pacific Grove, CA. The only middle school in the Pacific Grove Unified School District (PGUSD), it serves all of the city of Pacific Grove and an unincorporated, residential area of Pebble Beach bordering Pacific Grove (Peiffer, 1992). According to information supplied by the City of Pacific Grove (Pacific Grove

Recreation Department, 1992), the community is located in central California at the tip of the Monterey Peninsula. Pacific Grove was incorporated as a city in 1889 and it holds the distinction of having been the last "dry" town in California. It has a population of 16,865. Mainly a residential community, the city has some commercial development and very little industrial activity.

The economy is based on tourism, local services, and government functions. Asilomar State Beach and Conference Grounds are located in Pacific Grove. The Monterey Bay Aquarium is partially in the city. Pacific Grove is famous as "Butterfly Town, U.S.A." because it is a winter home for the Monarch Butterfly. Each October PGUSD school children march in the annual Butterfly Parade to celebrate the migration of the Monarchs. November brings the annual Marching Band Festival, with 30 high school bands parading through town.

Pacific Grove Middle School

According to the principal of Pacific Grove Middle School, the certificated staff at PGMS consists of one principal, one vice-principal, one counselor, and 27 teachers. On December 4, 1992 the class count showed 183 sixth graders, 179 seventh graders, and 151 eighth graders, for a total of 513 students. The ethnic distribution of students reported in the 1990-91 School Accountability

Report Card (Pacific Grove Middle School, 1991) was 2% Asian, 1% Black, 2% Hispanic, and 95% White. Whitmore (1992) reported that CTBS (California Test of Basic Skills) median national percentile results for the 1991-92 testing were as follows: 6th grade class average, sixty-sixth percentile (66 %ile); 7th grade class average, sixtieth percentile (60 %ile); 8th grade class average, seventy-sixth percentile (76 %ile). Students at PGMS come from two feeder elementary schools and they attend Pacific Grove High School for grades nine through twelve.

The PGMS School Day

As explained in the PGMS Handbook, the school has a six period day. An early "zero period PE" is available for students who wish to take an extra elective or to make up failed classes. After school music is available for jazz and orchestra students. All students begin the school year with at least four academic classes. Sixth graders take math, science/history (one semester each), and a two-period core class, consisting of English and reading, both taught by the same teacher. Sixth graders take an elective, which may be the Pass/Fail 6th grade explorative or another elective such as music which carries a letter grade, and PE, for a six period day. Seventh and eighth graders take math, science, history, English, an elective, and PE, for a six period day (Pacific Grove Middle School, 1992).

The PGMS Grading System

The registrar at PGMS reports that students at PGMS receive letter grades in most classes. The exceptions are 6th grade explorative, office cadet, and teacher's assistant, for which Pass/Fail grades are assigned. Grade point averages (GPAs) are calculated for honor roll and eligibility for extra-curricular activities. Plusses and minuses are shown on grades on report cards (B+, C-, etc.), but they are not calculated in a student's grade point average (GPA). Pass/Fail grades are also not calculated in a student's GPA. Each letter grade has a value in grade points: A = 4, B = 3, C = 2, D = 1, F = 0. A student with six B's (regardless of plusses and minuses) would have 18 grade points, which would be divided by 6 (for six classes), giving a 3.0 GPA. A student with an A-, B, B-, C+, D+, and a Pass would have 13 grade points, divided by 5 because there are five classes giving letter grades, for a 2.6 GPA. Grades have the same value regardless of the subject or class; an A in Algebra or Spanish is calculated the same way an A in PE or Resource Math is calculated. Advanced classes and resource classes are listed as such on school records and report cards, but they are not treated differently for GPA purposes (LeBlanc, 1993).

Study Skills at PGMS

According to Whitmore (1992), PGMS has had a study

skills program for over five years. All students have a three-ring binder with subject dividers and an assignment calendar as described in the PGMS Handbook. The school provides assignment calendars from Curriculum Associates. There are directions in the calendar for recording assignments. Notes, class handouts, and assignments are to be kept in the binder. The use of binders and calendars is communicated to parents through newsletters and the school handbook (Pacific Grove Middle School, 1992; Whitmore, 1992). In the Student-Parent Handbook 1992-93, PGMS students and parents are told to expect homework:

> Homework is an important part of our school program and is assigned regularly in academic classes. Parents are encouraged to establish a set routine at home so that students recognize the importance of school work and accomplish the tasks assigned. Whenever possible, academic departments will schedule tests on different days to avoid excessive homework on any given night. Middle school students should average one to two hours of homework per night. For a situation in which the student is not regularly completing homework, an academic contract may be developed. (Pacific Grove Middle School, 1992)

Population Sample for This Study

This study included two groups of PGMS students:

students enrolled exclusively in regular education classes, and students with learning disabilities enrolled in one or more resource classes. Students enrolled only in regular education classes were chosen randomly for this study. Students at PGMS are randomly assigned to science and history classes (with the exception of one resource 8th grade history class). Students making up a science or history homeroom represent a random sample of the PGMS student body. For this reason, science and history homerooms were chosen for this study. Homerooms chosen were the only 6th grade science homeroom, the only 6th grade history homeroom, the two 7th grade science homerooms, the only 8th grade science homeroom, and the only 8th grade history homeroom.

The researcher asked teachers she could come to their class during homeroom to do a survey of student binders. She asked teachers to provide binders for one third of their students chosen in a random manner, using either the class roll list or the seating chart, according to the teacher's convenience. A total of 52 regular education student binders were checked. This sample included 19 sixth graders, 20 seventh graders, and 14 eighth graders. There were 13 sixth grade boys, 7 seventh grade boys, and 8 eighth grade boys, for a total of 28 boys in regular education classes. There were 6 sixth grade girls, 13 seventh grade

girls, and 5 eighth grade girls, for a total of 24 girls in regular education classes.

Most of the students with learning disabilities were surveyed in their resource classes. In order to have the number of students with learning disabilities closer to the number of students without learning disabilities, all of the students in four resource classes were included. There were 36 students surveyed in this group: 13 sixth graders, 10 seventh graders, and 13 eighth graders. There were 6 sixth grade boys, 2 seventh grade boys, and 7 eighth grade boys, for a total of 15 boys in resource classes. There were 7 sixth grade girls, 8 seventh grade girls, and 6 eighth grade girls, for a total of 21 girls in resource classes.

Altogether binders were checked for 88 students: 32 sixth graders, 30 seventh graders, and 26 eighth graders. There were 43 boys and 45 girls.

Development of the Instrumentation

To collect data for this study, the researcher used a binder check sheet that she developed in consultation with a group of regular education and special education professionals. This check sheet appears in the Appendix of this report. A preliminary study of student binders gave information that the researcher used in designing the binder check sheet. Ellis and Lenz (1990) noted that it is important that teaching procedures be easy to implement and

that teachers feel competent in using them (p. 11). With this in mind, the researcher designed the binder check sheet to be easy for teachers to administer, and easy for students, parents and teachers to understand. All the items on the check sheet are measurable, obtained by counting, with no subjective items such as "neatness" or "good organization." Students, parents and teachers could use the check sheet as a guideline for cleaning up a binder. The zero to ten scoring system was chosen for its simplicity and ease of understanding, with ten being the top score.

The binder check sheet is divided into five sections, each section concerned with a different binder-related problem. The first section checks the pencil pouch. Middle school and high school teachers who were consulted spoke of the importance of coming to class with the right equipment. Skills for School Success teaches students to keep a pencil pouch in their binders. Although individual teachers may have specific requirements such as pencils for math or pens only for essays, the standard of "two pens or pencils in a pencil pouch" seemed to fit most situations. On the check sheet, one point is earned if there is a pencil pouch containing two pens or pencils. If the pouch is missing or there are not two pens or pencils, the score for that item is zero.

The teachers who were consulted in the development of

the binder check sheet identified "lost papers" as a problem that affects grades. These papers may be homework that has been completed and needs to be turned in; handouts such as spelling lists; materials needed for studying such as notes taken by students during a lecture or video; and work in progress such outlines and rough drafts of multi-step projects. Lenz et al. (1991) noted that "failure to complete assignments may be related to... a failure to store a completed assignment in an appropriate place so that it can be retrieved and turned in when it is due" (p. 167).

Teachers named three aspects of paper handling that cause problems for students and result in lost work and low grades. First, students may put papers into their binders without securing them at all; the papers are simply loose. One high school history teacher reported that his way of checking a binder is to hold it upside down and shake it; if nothing falls out, the binder passes. Second, students may use the pockets and clips located on the inside covers of binders as catchalls rather than taking the time to file papers in the correct class section. One 8th grade history teacher said that her solution for lost papers would be the banning of binders with pockets and clips. A third problem named has to do with the way students file or misfile papers in the class sections; history papers end up in the math section and math papers end up in the science section.

In the development of the binder check sheet, the researcher counted unfiled and misfiled papers in students binders to determine standards for the check sheet. The check sheet addresses the three problems with paper handling as three separate sections: loose papers, pockets/clips, and class sections. Only papers directly related to a class were counted for the check sheet; personal notes and information on general school topics such as after school sports were not counted. Stapled packets of paper, such as handouts on science projects, were counted as one item, for ease of administration.

Instrumentation Scoring

Scores are recorded directly onto the binder check sheet, a copy of which appears in the Appendix.

On the section "Loose papers" students earned from two to zero points. Two was for having no more than five loose papers in the binder; one was for having no more than ten loose papers; and a score of zero was for a binder which had more than ten loose papers. "Pockets/clips" was scored the same way: two points for a binder with no more than five papers in the pockets or clips at the inside cover of the binder, one point for six to ten papers, and zero points more than ten papers.

The scoring for "Class section" was a little different. This section looked at whether or not a student had class

sections for the academic classes as well as how the papers were filed. A binder with at least four academic sections and no misfiled papers received two points. A binder with four sections and one to five misfiled papers received one point. Binders with more than five papers misfiled, or sections missing or not used, received zero points. Sixth grade binders which had English/reading organized as one section (this is a two period class taught by one teacher) received credit for two sections.

The binder check sheet included a score for calendar use. Leal and Rafoth (1991) reported that students with learning disabilities behave like younger children on tasks such as remembering the homework assignment. Reetz (1991) reported that more than half of the parents she surveyed reported having major or minor problems helping their children develop independent study habits. In Skills for School Success students learn to use a calendar to record homework. PGMS gives calendars from this program to all students at the start of the school year, with replacement copies available for purchase in the office.

The binder check sheet has a section for calendar use. The highest score (three points) is for having calendar entries 80% or more of school days counted. Two points are earned for having entries 79% to 60% of the days counted, one point for 59% to 40%, and zero points for entries fewer

than 40% of the days counted. Only homework assignments counted as calendar entries; notations such as "minimum day" or "Jason's party" were not counted. The binder check sheet did not consider the length of the calendar entries or how many different entries there were for one day. A one line entry received the same credit as an entry which covered several lines and several subjects. To get credit for a day, at least one entry related to class assignments needed to be present. When there was no calendar in the binder the researcher recorded a zero for that section.

An overall score of zero to ten was obtained by adding up the points earned on the sections.

Data Collection Procedures

Data collection for this study included two processes. The first process was the checking of student binders by the researcher. The second process was the compiling of GPAs.

Binders were checked once in March, 1993 for each of the students included in the study. The format for checking binders was the same in regular education classes and resource classes. The researcher told the students that she was doing a survey to see how middle school students organize their binders. She told the students that she would look at things like the number of loose papers and how often calendars were marked, that the researcher would not read personal notes, and that results of the survey would

not affect their grades. The researcher assured students that their binders would be returned by the end of the period. A few students watched as the researcher checked their binders, and their comments will be reported in the next chapter. The researcher collected binders in a group so that students did not have time to tidy up or otherwise change their binders.

Grade point averages for the semester ending January 22, 1993 were obtained from copies of report cards in the PGMS office, using the same formula described earlier. Students who did not have grades at PGMS in January, 1993 were eliminated from the study.

Data Analysis

The data collected in this study will be presented in the next chapter. A correlation coefficient was calculated to assess the correlation between organizational skills as measured by the overall binder score and academic achievement as measured by the grade point average, using each student's overall binder score (0 to 10 points) and GPA. Correlation coefficients were also calculated for the correlation between calendar use and grade point averages, using each student's score on the calendar section (0 to 3 points) and GPA. Correlation coefficients were calculated separately for the students enrolled only in regular education classes and for the students with learning

disabilities who were enrolled in resource classes.

For the remaining separate sections of the binder check sheet (pencil pouch, loose papers, pocket/clips, and class sections), chi-square tests were used to determine significant differences between scores on the sections and GPAs. A chi-square test is used "to decide whether there is a significant difference between samples that are observed to occur and those that would be expected to occur by chance" (Goehring, 1981, p. 239). The chi-square value increases as the difference between the observed frequencies and the expected frequencies increases (Gay, 1987). A chi-square table is used to determine whether the chi-square value is significant. Separate chi-square tests were done for scores of the students enrolled only in regular education classes and for the scores of students with learning disabilities on each section of the binder check sheet.

The next chapter will highlight the areas in which aspects of binder use made a difference for students in this study. It will discuss the results of this study and suggest ways in which the results could be applied to the classroom. It will suggest possibilities for further research.

Summary

With greater numbers of students in need and limited resources, it seems appropriate to review ways of helping students to succeed. The humble binder may be an important key to academic success for many students in regular and resource classes, and an important communication device for parents. The next chapter will review the results of this study on binder use.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

With as many as one student in four at risk for failure in school (Sprick, 1992), resources for special education strained (Latno-Yamate, 1992), and the efficacy of the special education delivery system in question (Affleck et al., 1988; Cosden, 1990), it is important to identify strategies which are effective in improving student achievement. At middle school, students with learning disabilities face challenges because of the structure of middle school and the emphasis on content as opposed to basic skills (Alley & Deshler, 1979). Skills for School Success teaches students to use a three-ring binder with a pencil pouch, calendar and subject dividers to manage school assignments. At Pacific Grove Middle School all students use three-ring binders with pencil pouches, calendars from the Skills for School Success, and subject dividers. This study investigates how the use of the binder system, as measured by a binder check sheet, relates to student achievement as measured by report card grades.

The next section presents the data collected in this study. A set of tables summarizes binder scores in relation to GPAs for the two groups of students, those in regular education and those in resource classes. Information

summarized in the first four tables on overall binder scores and calendar scores was used to calculate Pearson correlation coefficients. Information summarized on the remaining tables was used to calculate chi-square tests. Following each table there is a review of the data.

Results

Table 1

GPAs and Overall Binder Scores of Students in Regular Education

		Binder scores 0-3	4-6	7-10	Total
GPAs	4.0 - 3.0	7	16	10	33
	2.99 - 2.0	9	3	2	14
	< 2.0	1	1	3	5
	Total	17	20	15	52

Table 1 shows the relationship between GPAs and overall binder scores for students in regular education. According to the table, of the 33 students in the 4.0 to 3.0 GPA category (PGMS honor roll), 7 students had scores from 0 to 3, 16 had scores from 4 to 6, and ten had scores from 7 to 10. In the 2.9 to 2.0 category, there were 14 students; 9 students had scores from 0 to 3, three had scores from 4 to

[illegible] had scores from 7 to 10. In the lowest GPA category below 2.0, there were 5 students; one was in the 0-3 group, one was in the 4-6 group, and three were in the 7-10 group. A Pearson correlation coefficient was calculated using the data summarized in Table 1. The correlation coefficient was .1357, which is generally interpreted to be a negligible degree of correlation at the .01 level (Goehring, 1981).

Table 2

GPAs and Overall Binder Scores of Students in Special Education

		Binder scores			
		0-3	4-6	7-10	Total
GPAs	4.0 - 3.0	0	3	7	10
	2.99 - 2.0	2	8	4	14
	< 2.0	4	6	2	12
	Total	6	17	13	34

Table 2 shows the relationship between GPAs and overall binder scores for students with learning disabilities. The table shows 10 students in the 4.0 to 3.0 (honor roll)

category. None of these students had binder scores of 0 to 3, 3 students had scores from 4 to 6, and 7 students had scores from 7 to 10. There were 14 students in the 2.99 to 2.0 GPA category; two had scores from 0 to 3, eight had scores from 4 to 6, and four had scores from 7 to 10. There were 12 students with GPAs below 2.0. Of these, four had scores from 0 to 3, six had scores from 4 to 6, and two had scores from 7 to 10. The Pearson correlation coefficient calculated using the data summarized in Table 2 was .5164, which is generally interpreted as a strong degree of correlation at the $p=.05$ level (Goehring, 1981).

Table 3

GPAs and Calendar Scores of Students in Regular Education

	Calendar scores				
GPAs	0	1	2	3	Total
4.0 - 3.0	16	9	3	5	33
2.99 - 2.0	11	0	3	0	14
< 2.0	1	1	3	0	5
Total	28	10	9	5	52

Table 3 presents the data on GPAs and calendar scores for students in regular education. Of the 33 students in the 4.0 to 3.0 category, 16 students had a score of zero, indicating calendar use on less than 40% of the school days counted; 9 students had a score of one, for calendar use from 40% to 59% of the days; 3 students had a score of two, for calendar use from 60% to 79% of the days; and 5 students had the top score of three, for calendar use on 80% or more of the days counted. Of the 14 students with GPAs from 2.9 to 2.0, 11 had a score of zero; none had a score of one; 3 students had a score of 2; and none had the top score of three. There were 5 students with GPAs below 2.0. One student had a score of zero, one had a score of 1, three had 2's and none had 3's. A Pearson correlation coefficient was calculated using the data summarized in Table 3. The correlation coefficient obtained was -.0976, which would indicate no relationship between GPAs and calendar use at the p=.05 level (Gay, 1987).

Table 4

GPAs and Calendar Scores of Students in Special Education

	Calendar scores				
GPAs	0	1	2	3	Total
4.0 - 3.0	2	0	4	4	10
2.99 - 2.0	5	3	3	3	14
< 2.0	6	5	1	0	12
Total	13	8	8	7	36

The data on GPAs and calendar use for students with learning disabilities is summarized in Table 4. There were 10 students with GPAs above 3.0; two of these students had calendar scores of zero, none had scores of one, four had 2's, and four had 3's. Of the 14 students with GPAs from 2.99 to 2.0, five had zeroes, three had a score of 1, three had 2's, and three had the top score of 3. There were 12 students with GPAs below 2.0; six had a score of zero; five had a score of 1, one student had a 2, and no student had the top score of 3. The Pearson correlation coefficient calculated using the data in Table 4 was .4118, which is in the lower range of values generally interpreted to indicate a strong degree of positive correlation at the $p=.05$ level (Goehring, 1981).

Table 5

GPAs and Pencil Pouches for Students in Regular Education

GPAs	Students with pencil pouches	Students without pencil pouches	Total
2.5 -4.0	29	10	39
< 2.5	5	8	13
Total	34	18	52

Tables 5 and 6 show the relationship between GPAs and having a pencil pouch equipped with two pens or pencils. Table 5 shows that 34 students in regular education had the required pencil pouch; 29 of these students had GPAs from 2.5 to 4.0, and 5 students who had pencil pouches were below a 2.5 GPA. Of the 18 students in regular education who did not have pencil pouches, ten had GPAs at 2.5 or above, and eight students were below a 2.5 GPA. A chi-square test, "used to decide whether there is significant difference between samples of frequencies that are observed to occur and those that would be expected to occur by chance" (Goehring, 1981, p. 239), was calculated, using the data shown in Table 5. The chi-square value was 5.55, which

exceeds the expected value of 3.84 at the p=.05 level, indicating a significant difference between the observed results and what would be expected to occur by chance.

Table 6

GPAs and Pencil Pouches for Students in Special Education

GPAs	Students with pencil pouches	Students without pencil pouches	Total
2.5 -4.0	19	2	21
< 2.5	4	11	15
Total	23	13	36

Table 6 presents the data on GPAs and pencil pouches for students with learning disabilities. A total of 23 students had pencil pouches with two pens or pencils; 19 of these students had GPAs between 2.5 and 4.0, while 4 students were below 2.5. There were 13 students who did not have pencil pouches; only two of these students were in the upper GPA group. The chi-square value calculated for Table 6 was 15.42, which is significant at the p<.01 level.

Table 7

GPAs and Numbers of Loose Papers in Binders of Students in Regular Education

GPAs	Numbers of loose papers: 0 to 5	Numbers of loose papers: > 5	Total
4.0 - 3.0	28	5	33
2.9 - 2.0	9	5	14
< 2.0	5	0	5
Total	42	10	52

Tables 7 and 8 summarize the data for GPAs and numbers of loose, unfiled and unsecured school papers in students' binders. Table 7, giving the data for students in regular education, shows 33 students in the top GPA category, from 4.0 to 3.0; 28 of these students had zero to five loose papers and 5 students had more than five loose papers. In the middle GPA category, 2.9 to 2.0, there were 9 students with up to five loose papers and 5 students with more. All of the 5 students below a 2.0 GPA had five or fewer loose papers. The chi-square calculated using the data in Table 7 was 2.12, less than the expected value of 5.991, which would

indicate that there was not a relationship between GPAs and loose papers in binders for these students.

Table 8

GPAs and Numbers of Loose Papers in Binders of Students in Special Education

GPAs	Numbers of loose papers: 0 to 5	Numbers of loose papers: > 5	Total
4.0 - 3.0	9	1	10
2.9 - 2.0	10	4	14
< 2.0	7	5	12
Total	26	10	36

Table 8, presenting the data on GPAs and numbers of loose, unfiled and unsecured papers in the binders of students with learning disabilities, shows 10 students above a 3.0 GPA; 9 of these students had up to five loose papers and one student had more than five loose papers. There were 14 students in the middle GPA category of 2.9 to 2.0; 10 students had up to five loose papers and four had more. Of the 12 students below a 2.0 GPA, 7 students had up to five loose papers while five had more. The chi-square value

of 2.72, not significant at the p=.05 level, would indicate that there is not a relationship between GPAs and loose papers for these students.

Table 9

GPAs and Papers in the Pockets/Clips of Binders of Students in Regular Education

GPAs	Papers in pockets/clips: 0 - 10	Papers in pockets/clips: > 10	Total
4.0 - 3.0	20	13	33
2.9 - 2.0	9	5	14
< 2.0	3	2	5
Total	32	20	52

Tables 9 and 10 present the data on GPAs and numbers of unfiled, unsorted papers "stuffed" into the pockets and clips of the inside covers of binders. Table 9 shows the data for the 33 students in regular education. In the GPA category from 3.0 to 4.0, 20 students had from zero to ten papers in the pockets/clips, while 13 had more than ten papers. In the middle GPA category, 9 students had zero to

ten papers in the pockets/clips, and 5 students had more than ten papers. Below a 2.0 GPA, three students had zero to ten papers, and 2 students had more than ten. The chi-square value of .048, calculated using the data in Table 9, is not significant at the p=.05 level, indicating that there was no relationship between GPAs and the number of loose, unsorted papers in the pockets/clips.

Table 10

GPAs and Papers in the Pockets/Clips of Binders of Students in Special Education

	Papers in pockets/clips		
GPAs	0 - 10	> 10	Total
4.0 - 3.0	8	2	10
2.9 - 2.0	9	5	14
< 2.0	5	7	12
Total	22	14	36

Table 10 shows the data on GPAs and the number of papers in the pockets/clips for students with learning disabilities. Of the 10 students in the top GPA group, 8 students had binders with zero to ten papers in the pockets/clips, while

2 students had more than ten papers. In the middle GPA category, 2.9 to 2.0, 9 students had zero to ten papers while 5 students had more. In the lowest GPA category, below 2.0, 5 students had zero to ten papers and 7 students had more. A chi-square value of 3.82, not significant at the $p=.05$ level, was obtained using the data in Table 10.

Table 11

GPAs and Class Section Scores of Students in Regular Education

	Scores		
	0	1 - 2	
GPAs			Total
4.0 - 3.0	15	18	33
2.9 - 2.0	10	4	14
< 2.0	2	3	5
Total	27	25	52

Tables 11 and 12 show the data on GPAs and scores for the use of class sections/subject dividers. To obtain the top score of two, a student needed to use at least four class sections (three for sixth graders), and have no misfiled papers in the sections. A score of one was for

using the right number of sections, but having as many as five misfiled papers. A score of zero was for having less than the right number of sections, not using sections, or having more than five papers misfiled. Of the 52 students in regular education, 27 had scores of zero and 25 had scores of one or two. The chi-square value of 2.97 obtained using the data in Table 11 would indicate that there was no relationship between GPAs and this aspect of binder organization.

Table 12

GPAs and Class Section Scores of Students in Special Education

	Scores		
	0	1 - 2	
GPAs			Total
4.0 - 3.0	3	7	10
2.9 - 2.0	6	8	14
< 2.0	4	8	12
Total	13	23	36

Table 12 shows the data for GPAs and class section/subject divider use for the 36 students in special

education. A score of zero was earned by 13 students; scores of one or two were earned by 23 students. The chi-square value of .047 is not significant at the $p=.05$ level.

Some additional information may be noteworthy. There were three "perfect tens" in the study, one for a regular education student and two for students with learning disabilities. All three of these students had GPAs above 3.0, placing them on the PGMS Honor Roll. There were four "perfect zeroes"; the two in regular education had GPAs in the 2.49 to 2.0 category, and the two in resource classes had GPAs below 2.0. All of the students with learning disabilities who made the honor roll (3.0 and above) had binder scores of 5 or more. On the item regarding pencil pouches, most of the students above 2.5 in both groups had pencil pouches and most of the students below 2.5 did not have them.

Discussion

The goal of this study was to answer five questions regarding the relationship between binder use and academic achievement. The first question asked what the correlation is between overall binder use and achievement as measured by report card grades. The results of this study showed that there was a negligible positive correlation between binder organization and grade point average for students in regular education classes, but there was a strong positive

correlation between these variables for students with learning disabilities.

The second question asked if there is a relationship between calendar use and achievement as measured by report card grades. The data showed that a relationship did not exist for students in regular education classes, but a strong relationship existed for students with learning disabilities enrolled in resource classes.

The third question asked if there is a relationship between the use of separate sections in the binder for each class, and achievement as measured by report card grades. The data showed that there was not a relationship.

The fourth question asked if there is a relationship between overall organization of paperwork and achievement as measured by report card grades. The data showed that there was not.

The final question asked if there is a difference in the relationship between binder use and grades for students in regular education and students in the resource program. As reported above, there is a difference, with overall binder use and calendar use having a strong positive correlation with achievement for students in resource programs but not for students in regular education. Pencil pouches turned out to be one area where scores for both groups showed that there was a relationship with grades.

The results for students in regular education with high GPAs and low binder scores seem to support the research of Zimmerman and Pons (1986) showing that high achieving students have their own self-regulating strategies. This also agrees with the findings of Archambeault (1992), that successful students are aware of which study strategies work best for them. For some students in this study, the Skills for School Success binder system seems to be part of their strategy. This study did not ask students about alternatives to the binder system from Skills for School Success, but some students volunteered information. One student with a 4.0 GPA said the he "never" uses his calendar; he said he "just remembers" his homework. Another student with a 3.66 average showed how he wrote homework assignments on his book covers. Other students explained systems for putting headings on paper and putting the books needed for homework straight into a book bag at the end of class. One student reported that she did not use her subject dividers for storing homework but never had problems; she kept homework in "different little places" in her binder.

Of the nineteen students in regular education who had GPAs below 3.0, five students had overall binder scores of 7, 8 or 9. For these students, it seems likely that academic success depends on more than organizational skills.

As Lenz (1991) pointed out, assignment completion involves many different skills. This study did not assess whether or not students actually did or handed in the homework they recorded, or if they recorded all the assignments they needed, or the quality of student work. For the students with GPAs below 3.0 whose binder scores ranged from 6 to 0, more information would be needed to see if improved organizational skills would be accompanied by higher grades.

For the students with learning disabilities, the correlation coefficient of .5164 showed a significant positive correlation between organizational skills as measured by the overall binder score and GPAs. This study did not ask what sort of monitoring or reinforcement teachers were doing in the area of binders, calendars, and so forth. However, it did appear to the researcher that binders for 6th graders in resource classes contained more materials and got more use than binders for 6th graders in regular education. Lenz (1983) described students with learning disabilities as passive, inactive learners, and Deshler and Schumaker (1986) noted that these students need to be cued to use a strategy. For the students with learning disabilities, the binder system may have become a reliable strategy, for which monitoring and reinforcement would be appropriate.

The data on pencil pouches showed that most of the

students with GPAs above 2.5 met the requirement to have two pens or pencils in a pencil pouch; most of the students below 2.5 did not meet this requirement. The study did not ask about alternatives such as back packs, nor did it ask if students were meeting all of the requirements in regard to bringing all necessary materials to class. However, the correlation on this item seems to reinforce the value of having proper school supplies.

The researcher observed that hole punching could help students with paper handling. Some teacher handouts were hole punched; some were not. Access to three-hole punches by students and teachers might make the task of paper handling easier.

Overall, the researcher was struck by the students' spirit of cheer and cooperation. They seemed glad that their binder scores would not count on their grades. Many wanted to know "what they got" on their binders. Some made jokes about what would be found in their binders. Most seemed pleased to be participating in a survey.

Implications

The results of this study show that organizational skills may correlate with good grades for students with learning disabilities, and it shows that organized binders alone will not guarantee good grades. For students with learning disabilities, the binder system may be more helpful

than it is for other students. As students with learning disabilities move into mainstream classes, it may be especially helpful for these students to remember the value of binder skills.

The results of this study suggest that it may be more important for teachers to reinforce binder skills in grade level classes, as opposed to advanced classes; with students who have the combination of low grades and low skills; and with students with learning disabilities. For regular education teachers whose classes include mainstreamed students with learning disabilities, it would be important to continue to reinforce binder skills.

The results of this study show the importance for students of having a system for managing assignments, which may in fact be the Skills for School Success system. For parents of students with learning disabilities, this study gives information on the importance of having students continue to maintain an organized binder, even in a mainstream situation. For parents who are limited in their time or ability to help their middle school children with homework, this study suggests that a few minutes spent monitoring the organization of the binder and the status of school supplies may be a helpful contribution.

Further research

Different research designs could give more precise

information on the correlation between binder skills and academic achievement. One possibility would be the study of several sections of students who have the same subject and the same teacher, all with same assignments and the same format for homework directions. Such a study could take place early in the school year, after class lists are set, and conclude with report card grades. In this situation, a study of calendars and binder organization for this group of students would involve only one teacher and would eliminate any confusion about whether or not there was homework on a given night, what handouts needed to be saved, and so on. Information gained in such a study could be immediately helpful to the teacher and students.

A study involving intervention would be helpful in assessing whether or not improving binder skills will result in improved grades. Wood (1991) observed that "many teachers assume when assignments are given that students know what to do. Discussions with these students will soon show this is not the case" (p.18). A short course on study skills could be helpful for students who are new to the school and for students who show the combination of poor skills and poor grades. The study could compare grades before and after the course.

Finally, a study on the effectiveness of teachers' practices in assigning homework could be helpful. A teacher

with two sections of students in the same subject and having the same assignments could assign homework to one section by having students copy assignments onto their calendars. For the other section, the teacher could provide handouts, eliminating the need for students to copy assignments onto the calendar. At the end of a time period, grades and statistics on assignment completion could be compared to determine which way of assigning homework is more effective.

Summary

Increasing numbers of children are at risk for failure in school (Comer, 1988; Sprick, 1992), school finances are strained and unlikely to improve (Latno-Yamate, 1992), and greater numbers of children with learning disabilities are served in regular education classrooms (Cosden, 1990). Learning strategies and study skills can assist middle school and high school students to meet the demands of secondary curriculum (Alley & Deshler, 1979; Archer & Gleason, 1989; Deshler & Schumaker, 1986; Lenz et al., 1987; Lenz et al., 1991; Missouri LINC, 1991).

At Pacific Grove Middle School, students use three-ring binders equipped with pencil pouches, subject dividers, and calendars from Skills for School Success to manage their assignments. The purpose of this study was to see how the use of the binder system correlates with academic achievement for students in regular education and resource classes at PGMS.

CHAPTER FIVE

SUMMARY

This study on the correlation between binder skills and academic achievement took place at Pacific Grove Middle School in Pacific Grove, California during the 1992-93 school year. The study included 88 sixth, seventh, and eighth graders; 52 students were enrolled only in regular education classes, and 36 students, identified as having learning disabilities, were enrolled in one or more resource classes.

The purpose of the study was to see how binder use correlates with academic achievement for students in regular education and students with learning disabilities. The study compared scores on a binder check sheet with grade point averages. The binder check sheet, developed in consultation with regular and special education professionals, graded students on binder skills, including having a pencil pouch, using a calendar to record assignments, filing and handling school papers, and maintaining class sections. The data collected included an overall binder score of 10 to 0, sub scores on five separate sections of the check sheet, and grade point averages.

Pearson correlation coefficients showed no significant correlation between overall binder scores and GPAs for students in regular education classes, and no correlation

between calendar use and GPAs for students in regular education. Correlation coefficients did show a significant positive correlation between overall binder scores and GPAs, and calendar use and GPAs, for students with learning disabilities. The coefficient was .5164 for the correlation between overall binder scores and GPAs for students with learning disabilities. The coefficient was .4117 for the correlation of scores on calendar use and GPAs for students with learning disabilities.

A chi-square test showed a relationship for both groups between having a pencil pouch with two pens or pencils and having a GPA above 2.5. At or above a 2.5 GPA, most students in both groups had the requisite pencil pouch; below a 2.5 GPA, most students did not. Chi-square tests did not show a relationship between paper handling skills (loose papers, unfiled papers, and misfiled papers) and grades.

The results of this study show that organizational skills as measured by the binder check sheet may correlate with grades for students with learning disabilities. The results show the connection between grades and having proper school supplies, as represented by the pencil pouch, for all students.

The study supports the literature which reports that high achieving students develop and use their own

strategies, while students with learning disabilities have difficulty choosing and using strategies. It suggests the importance for teachers of reinforcing calendar and binder skills for students with learning disabilities, especially as more of these students are placed in regular education classrooms. For parents who are limited in time or ability to help their middle school children with homework, this study suggests that parents can make an important contribution by helping their children with keeping their binders in order and by seeing that their children have proper school supplies.

Further research could give more precise information on the relationship between binder/calendar skills and academic achievement at middle school. One area which could be explored would be a more exact measurement of the relationship between calendar use and achievement, by confining the study to one group of students who have identical teachers and assignments. A second area of study could be a comparison of the effectiveness of having students copy homework assignments on to calendars as opposed to having teachers provide students with handouts listing assignments. A third area for study would be the effects of intervention, to measure the effectiveness of training in binder skills for students who are having difficulty.

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APPENDIX

BINDER CHECK

PENCIL POUCH

Pencil pouch contains at least 2 pens or pencils ___ 1

Pencil pouch is missing or it contains only 1 pen or pencil ___ 0

LOOSE PAPERS

0 to 5 loose papers ___ 2

6 to 10 loose papers ___ 1

More than 10 loose papers ___ 0

POCKETS/CLIPS

0 to 5 papers in the pockets or clips ___ 2

6 to 10 papers in the pockets or clips ___ 1

More than 10 papers in the pockets or clips ___ 0

CALENDAR

Entries 80% or more of school days ___ 3

Entries 79-60% of school days ___ 2

Entries 59-40% of school days ___ 1

Entries less than 40% of school days ___ 0

SUBJECT DIVIDERS/ CLASS SECTIONS

All papers are in the correct section; there are at least 4 sections used ___ 2

1 to 5 papers are in the wrong section;
there are at least 4 sections used ___ 1

More than 5 papers are misfiled;
sections are missing or not used ___ 0

Total_____ 10